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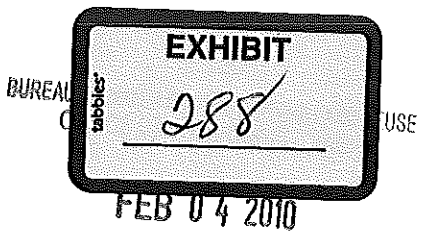


February 3, 2010

Paul Stacey
Director: Bureau of Water Protection & Land Reuse
Planning and Standards Division
Department of Environmental Protection
79 Elm Street
Hartford, Ct 06106-5127

Re: Comments on Proposed Stream Flow Standards and Regulations Issued October 13, 2009

Dear Mr. Stacey:

Thank you for the opportunity to submit comments on the proposed Stream Flow Standards and Regulations. As a director of a consulting firm that provides natural resources management, water supply planning and source development engineering, I have several comments and suggestions regarding the proposed regulations and the methods and schedules of implementing these regulations.

1. The Department should consider classifying the State's streams *before* the Regulations are implemented. Not only would this help the regulated community understand the effects of the proposed regulations on each stream, the process of classification would doubtless provide important insights that would help DEP to optimize and improve the language and effectiveness of the regulations.

2. The definition of "dam" in the proposed regulations refers to the definition provided in RCSA Section 22a-409-1. However, this definition appears too broad because the proposed regulations have an inherent assumption that a "dam" impounds a reservoir having considerable storage. This is not always the case, as some dams have no appreciable reservoir and no means by which the owners can release significant water from storage. The regulations should define dams having no significant storage as "other structures." Or provide alternative standards that apply to small dams with small impoundments.

3. According to the proposed regulations, in the adoption of stream classifications, the commissioner shall consider 13 factors, including a catch-all: "*Any other factor that the commissioner reasonably deems necessary.*" However, there is no ranking of the relative importance of each factor in the classification process. Thus, it is impossible to know how the different factors will be weighed during DEP's initial classification, or in any subsequent dispute of a proposed classification. Likewise, if a petitioner requests a classification change, there will be no standardized basis for evaluating the merits of the request.

   While any attempt to classify streams must recognize the uniqueness of each stream, the classification criteria should be as detailed as possible to ensure the uniformity of the classification process and to minimize the subjectivity of the Standards. It would be unfortunate if this important task were relegated to guidance documents, to be developed at a later date.

4. Regarding the narrative standards, the proposed regulations indicate that a Class 1 stream *"shall, at all times...exhibit the natural variation of flows and water levels characteristic of systems that have not been altered by human activity."* Given this definition, one could argue that no system could be classified as Class 1, as the flows in all Connecticut streams have been significantly altered by human land use activities, such as logging, agriculture and the construction of roads, buildings and other structures. The narrative standard for Class 2 streams contains similar wording. The regulations could be improved by revising these definitions to reflect the true nature of all human impacts on stream hydrology, perhaps by distinguishing those direct impacts on stream flows and water levels (e.g., via diversions), from indirect impacts.

5. According to the Presumptive Standards, dam owners must *"...release the greater of 0.1 cfsm or the minimum stream flow required pursuant to sections 26-141a-1 to 26-141a-8, inclusive, of the Regulations of Connecticut State Agencies if the release is into a river or stream segment designated as Class 4..."*

   By invoking the 1979 Minimum Stream Flow Standards (26-141a-1 to 26-141a-8), it appears that the proposed regulations will extend the jurisdiction of the Minimum Stream Flow Standards to *all* streams – not just those that are stocked by the State. However, the Minimum Stream Flow Standards were developed to apply only to streams stocked by the State. Thus, can it be shown that these standards are appropriate and applicable to all Class 4 streams? Moreover, because the proposed Stream Flow Regulations are intended to replace the Minimum Stream Flow Standards, it seems an odd approach to *expand* the jurisdiction of the Minimum Stream Flow Standards, if only temporarily, under the proposed regulations.

6. With respect to the maximum flow alteration rule for "other structures," the proposed regulations make no allowance for high flow conditions. Thus, any diverter who withdraws water directly from a stream must comply with the maximum flow reduction at all times, even if ambient flows are far above normal. This could lead to a bizarre situation in which, for example, a water utility must purchase water from another utility, ostensibly to minimize impacts on flow in its source stream, even when its source stream is above flood stage.

   Although the proposed regulations allow applicants to request approvals for different maximum flow alterations, e.g, through a variance or flow management compact, it may be appropriate and more efficient to develop a self-implementing approach within the presumptive standards to provide a "sliding scale" of the maximum flow alteration rule. Under this scenario, when high flows persist during any season, a diverter may be allowed a greater withdrawal. For water systems having significant off-stream storage (e.g., irrigation ponds, pumped storage reservoirs, etc.), this provision would also allow the diverter the opportunity to skim and store more water from floods, thereby decreasing the need to pump water from the stream when flows subside. This approach would seem to offer both greater resource protection and more favorable operating conditions for many water users.

7. The headwaters of many of Connecticut's streams and rivers lie beyond our borders. In many drainage basins, the use of these resources in headwater states for drinking water, agriculture and

industry continues to increase. However, the proposed regulations do not sufficiently recognize the impacts of water diversions and other manipulations of stream flow occurring in neighboring states. Since these impacts would not be subject to Connecticut's regulations, the stream flow entering Connecticut from other states may be significantly diminished from what would be expected based on USGS statistics. Likewise, stream flows may be impacted by diversions or other manipulations within Connecticut that are categorically exempt from the Stream Flow Standards.

Under the proposed regulations, using empirically derived flow statistics (e.g., Q99, Q95, etc.) to establish minimum flow releases or maximum flow alterations may be inadequate. The regulations should specifically allow for adjustments to the presumptive standards, based on the intensity and periodicity of upstream flow alterations in neighboring states, or alterations by water users who are exempt from the regulations. Otherwise, Connecticut's water utilities and other users could be forced to apply for variances or to establish flow management compacts for each instance in which the stream flow is significantly impacted by out-of-state or exempt uses.

8. Exception (5) to the jurisdiction of the Stream Flow Standards indicates that the following is not subject to the standards:

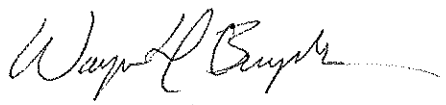
> *Operation of a dam that is not constructed on a river, stream or brook, and collects and temporarily stores stormwater runoff during storm events;*

The phrase "*during storm events*" is not necessary and could be interpreted as overly restrictive. Also, this exception appears to be no different from exception (17), which reads:

> *Operation of a dam designed and constructed for the primary purpose of providing temporary detention of stormwater during and immediately following a storm event;*

Thank you for considering these comments.

Sincerely,



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